What is Claimed:

1. A cradle motion unit for positioning a test head, comprising

a support structure which provides three degrees freedom;

a first lock; and

a second lock,

wherein motion in the three degrees of freedom are prevented by actuation of the first lock and the second lock.

2. The cradle motion unit of claim 1, wherein the three degrees of freedom include a translation motion along a first axis, a first rotation motion about a second axis, and a second rotation motion about a third axis.

3. The cradle motion unit of claim 2, wherein actuation of the first and second locks prevents the first and second rotation motions and the translation motion.

4. The cradle motion unit of claim 2, wherein the support structure includes a first cradle side and a plate coupled to the first cradle side for providing the translation motion and the first axis that is substantially parallel to the first cradle side.

5. The cradle motion unit of claim 4, wherein the second axis is orthogonal to the first axis.

6. The cradle motion unit of claim 5, wherein the third axis is orthogonal to the first axis and the second axis.

7. The cradle motion unit of claim 6, further comprising:

at least one guide block coupled to the load, the at least one guide block having a circular arc shaped slot, wherein

a center of the circular arc shaped slot is aligned with the third axis, and

the circular arc shaped slot is located on a circle that is orthogonal to the third axis.

8. The cradle motion unit of claim 4, further comprising:

a least one guide block coupled to the load, the at least guide block having a circular arc shaped slot; and

at least one cam follower attached to the plate for insertion into the circular arc shaped slot.

9. The cradle motion unit of claim 7, further comprising

at least one cam follower attached to the plate for insertion into the circular arc shaped slot,

wherein the circular arc shaped slot and the at least one cam follower are arranged so that rotation about the center is not at a center of gravity of the load.

10. A system having three degrees of freedom where the first degree of freedom is rotation about a first axis, the second degree of freedom is rotation about a second axis which is orthogonal to the first axis, and the third degree of freedom is translation along a third axis that is orthogonal to both the first axis and the second axis, and having two locks such that motion in all three degrees of freedom is inhibited when both locks are activated.

11. An apparatus for positioning a load, the system comprising:

a vertical support structure;

a plurality of horizontal surfaces including

(a) at least one of a first upward surface and a first downward surface, and

(b) at least one of a second upward surface and a second downward surface;

a plurality of horizontal rails,

wherein at least one of the plurality of horizontal rails is mounted to at least one of the plurality of horizontal surfaces.

12. The apparatus of claim 11, wherein the plurality of horizontal rails includes a first rail projecting in a first vertical plane and a second rail projecting in a second vertical plane.

13. The system of claim 12, wherein the first vertical plane is orthogonal to one of the plurality of horizontal surfaces.

14. The system of claim 12, wherein the second vertical plane is orthogonal to one of the plurality of horizontal surfaces.

15. The apparatus of claim 12, further comprising a horizontal support structure for coupling to a load, the horizontal support structure being coupled to at least one of the plurality of horizontal rails for positioning relative to the vertical support structure.

16. An apparatus attached to a side of a cradle for positioning a load relative to the cradle, the apparatus comprising:

a sliding arm structure between the side of the cradle and the load for translation motion along a first axis;

an arm support block, also between the side of the cradle and the load, for rotating the load about a second axis orthogonal to the first axis;

a guide block structure, at least a portion thereof being between the side of the cradle and the load, for rotating the load about a third axis orthogonal to the first axis and the second axis.

17. The apparatus of claim 16, wherein the guide block structure includes at least one circular arc shaped slot that defines the second rotation motion, the third axis being located at a center of the at least one circular arc shaped slot.

18. The apparatus of claim 16, wherein

the sliding arm structure is attached to the side of the cradle,

the arm support block is adjacent to the sliding arm structure and between the sliding arm structure and the guide block structure, and

the guide block structure is coupled to the cradle.

19. The apparatus of claim 16, further comprising

a first lock coupled to the cradle; and

a second lock coupled to the sliding arm structure,

wherein actuation of the first and second locks prevents the translation motion, the first rotation motion, and the second rotation motion.

20. A method for positioning a test head in a cradle motion unit, the method comprising the steps of:

positioning the test head on a first degree of freedom;

positioning the test head on a second degree of freedom;

positioning the test head on a third degree of freedom;

actuating a first lock coupled to the cradle; and

actuating a second lock coupled to the cradle,

wherein actuation of the first and second locks prevents motion in the three degrees of motion.

21. A method of positioning a test head relative to a cradle while said cradle is kept stationary, the method comprising the steps of:

imparting linear motion relative to the cradle;

imparting tumble motion relative to the cradle;

imparting theta motion relative to the cradle;

actuating a first lock coupled to the cradle; and

actuating a second lock coupled to the cradle,

wherein actuation of the first and second locks prevents motion in the three degrees of motion.